

# URBAN DESIGN ADVICE MEDIUM DENSITY HOUSING IN MARLBOROUGH DISTRICT

Prepared for: Marlborough District Council

Prepared by: Wayne Bredemeijer, Urban Designer and Senior Associate Urbanismplus Ltd

Date: 18 May 2023

## EXECUTIVE SUMMARY

This memo contains urban design advice related to Marlborough District Council's (MDC) approach to Medium Density Housing (MDH) development.

Supporting the advice in this memo, the factors contributing to best practice urban design for MDH development and the provisions of the Urban Residential Zone 1 (URes1), the residential zone in Marlborough that allows for the densest form of residential development, have been compared. Based on this it can be concluded that the URes1 zone provisions are not adequate for managing appropriate MDH outcomes. It is therefore recommended that a specific MDH Zone with its own provisions is created.

A combination of regulatory provisions (i.e. rules) and non-regulatory provisions (i.e. guidelines) would be the most effective method of managing MDH development. Generally, the following distinction is most appropriate:

- Matters relating to lots and buildings are best covered by rules.
- Matters relating to subdivision and streetscape are best covered by guidelines.

A table with proposed detailed rules and associated high-level rationale is provided as a starting point for a future variation to the Proposed Marlborough Environment Plan (PMEP). In addition, a list of topics that is proposed to be covered by guidelines is provided, with the recommendation that these should be further developed, illustrated, and consulted upon with stakeholders.

The need for a well-considered and comprehensive set of rules specifically for MDH, supplemented by guidelines as recommended above, has been further highlighted by a review of the zoning plan and concept masterplan proposed by the applicant of the Kerepi development for Blenheim North. This memo contains the findings of that review and recommendations for improvement of several urban design aspects, including two alternative layout options.

## INTRODUCTION

### Background and scope

In response to a request of the MDC, Urbanismplus has prepared urban design advice related to MDC's approach to MDH development.

One of the reasons behind this is that MDC has received requests to rezone land for residential development on the periphery of Blenheim's existing urban area. This specifically includes the proposed Kerepi development, while there are at least three other similar possible future requests that MDC is aware of. Three of the four requests propose residential development that is denser than the provisions of the PMEP contemplate. There is currently no baseline from which to assess the suitability of these proposals as there has been limited MDH development in Blenheim and the PMEP provisions do not contain methods of management. For this reason, MDC has sought urban design advice to

establish a framework for assessing MDH proposals. The framework might also be able to be applied as plan provisions for MDH development. Specifically, the information sought includes the following:

1. Outcomes: What factors contribute to good urban design for MDH development?; and
2. Plan provisions: If MDH development was to be provided for by way of permitted or controlled activity rules, what standards could be applied to achieve the outcomes identified via (1) above?

The advice contained in this memo is limited to MDH development in a greenfields context only.

### **Case study**

Urbanismplus has also reviewed the proposed zoning plan and concept masterplan<sup>1</sup> prepared by the applicant of the Kerepi development. This review has served as a helpful case study to inform the advice contained in this memo. The outcomes of this review, a series of annotated diagrams, are contained in Appendix 1. This information has been discussed with the applicant on 27 April 2023. This discussion also covered an earlier version of the recommended provisions, some of which have been refined based on the applicant's feedback.

## **DEFINITION AND CONSENTING APPROACH**

The Ministry for the Environment's 2012 definition<sup>2</sup> rates many of the different aspects of MDH included in the other definitions:

*MDH means comprehensive developments including four or more dwellings with an average density of less than 350m<sup>2</sup> per unit. It can include stand-alone dwellings, semi-detached (or duplex) dwellings, terraced housing or apartments within a building of four storeys or less. These can be located on either single or aggregated sites, or as part of larger master-planned developments.*

In the context of Marlborough, it would be residential development with an average lot size smaller than the URes1 minimum lot size of 290m<sup>2</sup> and lot widths narrower than the Residential 1 Zone minimum lot width of 14m. For this review, it has been assumed that MDH would be limited to single- and double-storey buildings as the scope of this review only includes greenfields development. It is assumed that the consenting approach will be based on integrated lot and dwelling design.

As an aside, it is expected that development with buildings over two storeys will become the subject of a possible future review of intensification of, and infill in, existing urban areas.

## **URBAN DESIGN FOR MEDIUM DENSITY HOUSING**

### **Factors contributing to best practice MDH urban design**

The following factors contribute to best practice urban design for MDH development:

#### **Connectivity**

This is to compensate for less on-site amenity, compared to conventional density, and therefore a greater desire to easily connect with off-site amenities. It is best managed with provisions for:

- Ensuring an acceptable number of vehicular and / or pedestrian connections with neighbouring sites.
- Stimulating an interconnected and walkable street network, with dead-end streets kept to a minimum.
- Setting a recommended maximum block length and possibly block width.

#### **Orientation**

---

<sup>1</sup> This review has at this early stage excluded the design of the streetscape.

<sup>2</sup> <https://www.mdh.org.nz/what-is-mdh/mdh-definitions>.

This is to ensure properties in a relatively dense environment receive an appropriate degree of solar access, whilst avoiding private open spaces located along the street which would result in compromised privacy and / or a lack of street activation. It is best managed with provisions for:

- Orientating blocks in a north-south blocks direction, so most of the lots will be in an east-west direction.
- Stimulating north-fronting lots to be wider, to ensure that the private open space can be located to the side of the dwelling, instead of behind, to ensure good solar access as well as privacy without the need for high fences along the street.

### **Activation**

This is to ensure that the streetscape that is more intensely used compared to conventional density developments, offers security, safety, legibility, and visual interest. It is best managed with provisions for:

- Stimulating the creation of perimeter blocks with fronts facing the street and backs bordering onto backs.
- Locating streets on park edges to ensure parks have a truly public character and are well overlooked from moving traffic and from dwellings and other uses fronting onto this street.
- Deterring the backs of lots to face all roads, including arterial roads, and instead locating lots side-on, or accessed via a rear lane or slip lane to ensure passive surveillance over the street environment.
- Ensuring a sufficiently wide dwelling to allow for a living room, dining room or kitchen to be located on the street side, in addition to the garage and the front door.
- Requiring some windows to face the street.
- Ensuring garage doors do not dominate the streetscape.
- Limiting the heights of fences located between the dwelling and the street, to allow for a visual connection.
- Encouraging the visibility of the front door.
- Requiring dwellings on corner lots to contribute to the activation of both streets that these are located on.

### **On-site amenity**

This is to ensure an appropriate degree of privacy, solar access, daylight and outlook for a relatively dense urban environment. It is best managed with provisions for:

- Ensuring that each dwelling has a private open space that has an appropriate area, dimensions, orientation, and accessibility.
- Requiring that dwellings have a bulk and location that is appropriate for their context and do not unduly impact the amenity of neighbours, including:
  - The height of the dwellings.
  - The height of the dwellings in relation to neighbours (often called 'recession planes').
  - The distance from the side boundaries of lots (if dwellings are not attached).
- Ensuring that each dwelling has an appropriate degree of outlook.

### **Visual character**

This is to ensure that the streetscape that is more intensely used compared to conventional density developments, is visually attractive. It is best managed with provisions for:

- Managing the degree of repetition in the built form.
- Limiting the uninterrupted row length of terraced housing.
- Ensuring that the streetscape accommodates trees, planting, footpaths, safe cycling conditions, and some parking, while stormwater facilities such as reserves with ponds, swales and raingardens are visually attractive and serve a recreational purpose.

## **The need for bespoke MDH provisions**

The above factors contributing to best practice urban design for MDH development and the provisions of the Urban Residential Zone 1 (URes1), the residential zone in Marlborough that allows for the densest form of residential development, have been compared. Based on this it can be concluded that the URes1 zone provisions are not adequate for managing appropriate MDH outcomes. It is therefore recommended that a specific MDH Zone is created, with its

own provisions, as outlined below.

## RECOMMENDED PROVISIONS

### Methods of management

A combination of regulatory provisions (i.e. rules) and non-regulatory provisions (i.e. guidelines) would be the most effective method of managing the factors and matters listed above. The following distinction is most helpful:

- Generally, matters relating to lots and buildings are best covered by rules.
- Generally, matters relating to subdivision and streetscape are best covered by guidelines.

### Rules relating to lots and buildings

It is recommended to consider the rules contained in the table below. The second column lists the rules (summarised) for the URes1, while the third column contains the recommended rules for a Medium Density Zone, with bold text highlighting those rules that are different from the URes1. The fourth column provides a brief rationale behind the recommended rules.

As stated above, the idea is that for MDH the subdivision and land-use consents are combined.

Topic	Current provisions for the Marlborough Urban Residential 1 Zone	Recommended Medium Density Zone or Overlay	Rationale
Minimum lot size	290m <sup>2</sup> .	<b>Not needed.</b>	As the lot will be determined in combination with the design of the dwelling, the minimum lot size will be managed by other provisions, such as for setbacks, height in relation to boundary, and outdoor living space.
Minimum lot frontage width	14m.	<b>Not needed.</b>	As the lot will be determined in combination with the design of the dwelling, the minimum lot frontage width will be managed by other provisions, such as for setbacks and the minimum non-garage width of the house frontage.
Maximum site or building coverage	Not included (Note: 45% in Urban Residential 2 Zone).	<b>Not needed.</b>	The maximum site or building coverage will be managed by other provisions, such as for setbacks and outdoor living space.
Lot development suitability	14m diameter circle outside minimum setbacks.	<b>Not needed.</b>	As the lot will be determined in combination with the design of the dwelling, a provision related to development suitability is not required.
Minimum outdoor living space (area and dimensions)	<ul style="list-style-type: none"> <li>• Has an area of 50m<sup>2</sup>.</li> <li>• Can contain a 5m diameter circle.</li> <li>• Has direct contact with the main indoor living area through an external door.</li> <li>• Does not include driveways, parking spaces or buildings but may include</li> </ul>	<ul style="list-style-type: none"> <li>• Has an area of 50m<sup>2</sup>.</li> <li>• Can contain a <b>4m</b> diameter circle.</li> <li>• Has direct contact with the main indoor living area through an external door.</li> <li>• Does not include driveways, parking spaces or buildings but may include</li> </ul>	<ul style="list-style-type: none"> <li>• An area of 50m<sup>2</sup> can be achieved in the design of a compact terraced dwelling on a relatively narrow lot and with the smallest rear setback of 4m (refer to Appendix 2, Figure 2.1.).</li> <li>• A 4m circle can easily accommodate a table and chairs for outdoor dining by a group of 8 people.</li> </ul> <p>The following provisions should be retained, as these are generally applicable</p>

	<p>decking.</p> <ul style="list-style-type: none"> <li>• Is not orientated to the south of the dwelling.</li> <li>• Does not have a slope of more than 5° in any direction.</li> </ul>	<p>decking, or areas covered by an awning, pergola or similar.</p> <ul style="list-style-type: none"> <li>• Is not orientated to the south of the dwelling.</li> <li>• Does not have a slope of more than 5° in any direction.</li> </ul>	<p>to residential design:</p> <ul style="list-style-type: none"> <li>• Has direct contact with the main indoor living area through an external door.</li> <li>• Does not include driveways, parking spaces or buildings but may include decking.</li> <li>• Is not orientated to the south of the dwelling.</li> <li>• Does not have a slope of more than 5° in any direction.</li> </ul>
<b>Maximum building height</b>	7.5m.	<b>7.5m + additional 1m for roof form.</b>	This provision assumes double-storey buildings. The additional 1m would allow for variation in roof design with potentially a height that would make this roof shape visible from the street.
<b>Maximum building length terraced housing</b>	Not included.	<b>Up to 6 dwellings, then a break in double-storey massing.</b>	This provision stimulates variation in the built form as perceived from the street.
<b>Height in relation to boundary</b>	<ul style="list-style-type: none"> <li>• Front boundary recession plane: 2.3m + 55°.</li> <li>• North boundary: 2.3m + 55°.</li> <li>• East and west boundaries: 2.3m + 45°.</li> <li>• South boundary: 2.3m + 35°.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Boundary setbacks and recession plane rules do not apply where a building wall is on a common boundary.</b></li> <li>• <b>There is no front boundary recession plane requirement.</b></li> <li>• <b>Side boundaries: 6.0m + 45°.</b></li> <li>• <b>Rear boundary: 3.0m + 45°.</b></li> </ul>	<ul style="list-style-type: none"> <li>• The provisions relating to the situation of a building wall located on a common boundary make allowance for terraced and semi-detached dwellings.</li> <li>• The absence of a front boundary recession plane requirement would stimulate the dwellings to be located closer to the street. A maximum-height dwelling located at the minimum front setback from the street boundary would not adversely impact on the streetscape in an MDH context.</li> <li>• A more permissive side boundary recession plane would stimulate dwellings to be located closer to the side boundaries in line with perimeter block development. A 7.5m dwelling would be located at least 1.5m from the side boundary. Also, in an MDH context with perimeter block development, there are generally less privacy and sunlight concerns across side boundaries.</li> <li>• A more restrictive rear boundary recession plane would stimulate dwellings to be located further from the rear boundary, in line with perimeter block development. A 7.5m dwelling would be located at least 4.5m from the rear boundary (sufficient to accommodate the 4m diameter circle referenced above). Also, as most private outdoor living spaces will be located to the rear of the lot, the rear boundary is the more sensitive interface in terms of privacy and sunlight.</li> </ul>

			The distinction in orientation (north, east, south, west) could be removed as this issue would be covered by orientation provisions for lot design and outdoor living spaces.
<b>Minimum front setback</b>	1m from the road boundary.	<b>3m</b> from the road boundary.	A 3m front setback would provide space for some planting to visually soften the streetscape. It would also encourage street activation, as residents would more likely feel comfortable to not screen windows located at a 3m distance from the street boundary when compared to the 1m distance in the URes1.
<b>Corner site minimum front yards</b>	1m.	<b>One front yard 3m, one front yard at least 2m.</b>	This provision would ensure that on at least one of the two street interfaces of a corner lot, there would be a front yard with sufficient space for planting and privacy, while on the remaining interface there would be space for low planting, a fence, and / or a path for access between the front and rear of the lot. Also, a 3m minimum setback on both sides would require unnecessarily inefficient use of land.
<b>Minimum garage front setback</b>	<ul style="list-style-type: none"> <li>• 5m from any road frontage.</li> <li>• 2m for a side entrance garage with a window on the wall facing the road.</li> </ul>	<ul style="list-style-type: none"> <li>• 5m.</li> <li>• <b>1m behind the main frontage of the dwelling (so also for side-entry garage).</b></li> </ul>	<ul style="list-style-type: none"> <li>• The 5m setback will continue to allow for the length of one parked car and help with the visibility of pedestrians when exiting the garage.</li> <li>• The 1m setback behind the main frontage of the dwelling would allow for the habitable part of the dwelling to visually relate to the street, including obliquely.</li> <li>• The 1m setback would reduce the visual impact of a blank garage door or garage sidewall that will not contribute to passive surveillance of the streetscape.</li> <li>• It is very likely that compliance with the 5m setback will also result in the 1m setback behind the main frontage, as it is likely that this main frontage will not be set back further than the minimum 3m front setback to efficiently use space on these relatively small lots.</li> </ul>
<b>Minimum side setback</b>	1m.	1m, unless attached.	This setback will continue to allow for access between the front and the rear of the lot, as well as daylight into windows located in the side elevations.
<b>Minimum rear setback</b>	1m.	1m.	In combination with the rear boundary recession plane proposed, this would result in only single-storey mass being located at this minimum distance from the rear boundary.
<b>Minimum non-</b>	Not included.	<b>5m.</b>	This provision would ensure that, in

garage width of the house frontage			addition to a garage, the dwelling would be wide enough to accommodate a front door (with hallway), as well as a living function such as living room, dining room, or kitchen, which would contribute to streetscape activation.
Habitable room on the ground floor with a window facing the street	Not included.	<p><b>Every dwelling shall have a ground floor living, dining room, or kitchen facing the street with a window.</b></p> <p><b>Single-storey dwellings with the street located to the south of the dwelling are exempt of this rule.</b></p>	<p>This provision would ensure that not only is the dwelling wide enough, but the floorplan is also designed with a living function such as living room, dining room, or kitchen located to the front, which would contribute to streetscape activation. In the case of double-storey dwellings, most bedrooms will be on the first floor and the ground floor frontage will be freed up for living spaces.</p> <p>For single-storey dwellings this may be hard to comply with if the backyard is to the north and the street to the south, making it less attractive for any of the living spaces to face the street (south). In that case it is likely that one or more bedrooms will be located on the southern side of the dwelling and therefore facing the street (with a window -refer to the next provision).</p> <p>It should be noted that dwellings across the street will likely orientate northwards towards the street, therefore contributing to activation and passive surveillance.</p>
Minimum area of ground floor windows facing the street	Not included.	2m <sup>2</sup> .	This provision would ensure that the side of the dwelling facing the street will accommodate a window that will be sufficiently large to enable passive surveillance, while being small enough to allow for a degree of privacy and possibly some wall space, e.g. for cabinetry and / or a benchtop etc.
Maximum heights of fences or walls	Maximum height of a fence or wall: 2m (Urban Residential 2: Max 1.2m fence on boundary with Open Space 1 or 2).	<ul style="list-style-type: none"> <li>• <b>Fence located forward of the dwelling (front and side boundary): 0.9m or 1.2m if the fence is at least 50% visually permeable.</b></li> <li>• <b>Fence located on a boundary with Open Space 1 or 2: 1.2m.</b></li> <li>• <b>Fence along other boundaries: 2m.</b></li> </ul>	<ul style="list-style-type: none"> <li>• The provision relating to the fence located forward of the dwelling would allow for opportunities for passive surveillance from the dwelling over the streetscape, and softening of the streetscape as vegetation in the front yard would be visible from the street. It would also allow for visibility of pedestrians from cars moving out of the site.</li> <li>• The provision for a 1.2m high fence with at least 50% visual permeability makes allowance for prefab pool fencing with a standard height of 1.2m.</li> <li>• Restricting the height of a fence located on a boundary with Open Space 1 or 2</li> </ul>

			would allow for opportunities for passive surveillance from the dwelling over these public spaces. <ul style="list-style-type: none"> <li>• A maximum fence height of 2m along all other boundaries will continue to protect privacy in private outdoor living spaces.</li> </ul>
<b>Outlook standards</b>	Not included.	<b>Minimum outlook spaces over a public or communal street, public open space or the lot that the dwelling is located on (centred on the largest window in that room):</b> <ul style="list-style-type: none"> <li>• Living room: d=6m by w=4m.</li> <li>• At least one bedroom: d=3m by w=3m.</li> <li>• Other bedrooms: d=1m by w=1m.</li> </ul>	These provisions would ensure an appropriate degree of indoor amenity. It should be noted that the living room outlook standard would encourage the living room to be located on the side of the street (as this is where the most space automatically will be), while a living room located to the rear would result in an at least 6m deep backyard (in front of the living room), assisting with open space amenity and privacy. <p>Whilst this is more than the proposed Minimum Outdoor Living Space provision for a 4m diameter circle, this is not excessive (even for MDH) and would provide good on-site amenity.</p>
<b>On-site parking</b>	Nil.	Nil.	Requiring on-site parking is not allowed under the NPS-UD.

### Guidelines relating to subdivision and streetscape

It is recommended that factors contributing to good urban design for MDH development that will not be covered by rules, will be addressed by guidelines. At least the following topics should be covered:

- Connectivity:
  - Ensuring an acceptable number of vehicular and / or pedestrian connections with neighbouring sites.<sup>3</sup>
  - Stimulating an interconnected and walkable street network, with dead-end streets kept to a minimum.<sup>4</sup>
  - Setting a recommended maximum block length and possibly block width.
- Orientation:
  - Orientating blocks in a north-south blocks direction, so most of the lots will be in an east-west direction.
  - Stimulating north-fronting lots to be wider to ensure that the private open space can be located to the side of the dwelling, instead of behind or in front, to ensure good solar access.
- Activation:
  - Stimulating the creation of perimeter blocks with fronts facing the street and backs bordering onto backs.
  - Locating streets on park edges to ensure parks have a truly public character and are well overlooked from moving traffic and from dwellings fronting onto this street.
  - Deterring the backs of lots to face all roads, including arterial roads, but instead locating lots side-on, or accessed via a rear lane or slip lane to ensure passive surveillance over the street environment.
  - Encouraging the visibility of the front door.
  - Requiring dwellings on corner lots to contribute to the activation of both streets that these are located on.
- Visual character:
  - Managing the degree of repetition in the built form.

<sup>3</sup> During discussions with the client team, it was suggested to include the requirement for one or more connections with possible adjacent Rural Zoned land (up to the boundary) in a policy, or as a matter of control or discretion.

<sup>4</sup> Consideration should be given to one or more rules stipulating: a maximum number of lots on a cul-de-sac; a maximum length of a cul-de-sac; that a cul-de-sac shall connect to a connected street (and not to another cul-de-sac; and / or that a cul-de-sac shall be straight so one can see the end.



- Ensuring that the streetscape accommodates trees, planting, footpaths, safe cycling conditions, and some parking, while stormwater facilities such as reserves with ponds, swales and raingardens are visually attractive and serve a recreational purpose.

It should be noted that the above list does not constitute the guidelines and that these should be elaborated upon and preferably illustrated with diagrams and examples.

## **NEXT STEPS**

The following next steps are proposed:

- Refining the proposed rules and associated rationale.
- Receiving more stakeholder input on the proposed rules.
- Producing guidelines.
- Receiving stakeholder input on the proposed guidelines.

## APPENDIX 1: REVIEW OF THE PROPOSED KEREPI DEVELOPMENT

Urbanismplus has undertaken an urban design review of the application for the proposed Kerepi development at 46 Old Renwick Road in Blenheim, titled Rezoning Proposal and Section 32 Evaluation for Kerepi Ltd, by Ayson Survey+. This has primarily entailed a review of Appendix B, Proposed Zoning Plan, and Appendix E, Concept Master Plan & House Plans. These were provided to Urbanismplus on 27 January 2023, with an update to the Master Plan (in the form of the Services Concept) on 6 April 2023.

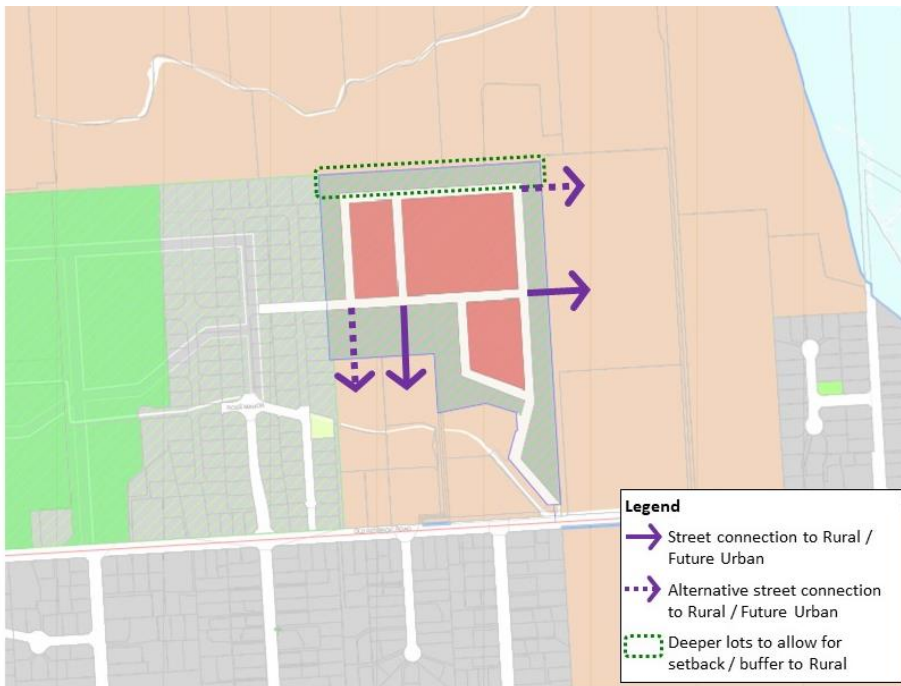
The following aspects are **supported**:

- The overall density.
- Concentrating MDH in the middle of the site.
- The centrally located neighbourhood park as a feature that will assist with legibility and identity and that will provide open space amenity in a location easily accessible from as many dwellings as possible, especially MDH.
- The internal connectivity.
- The arrangement with most of the lot frontages facing the street and backs turned to other backs.

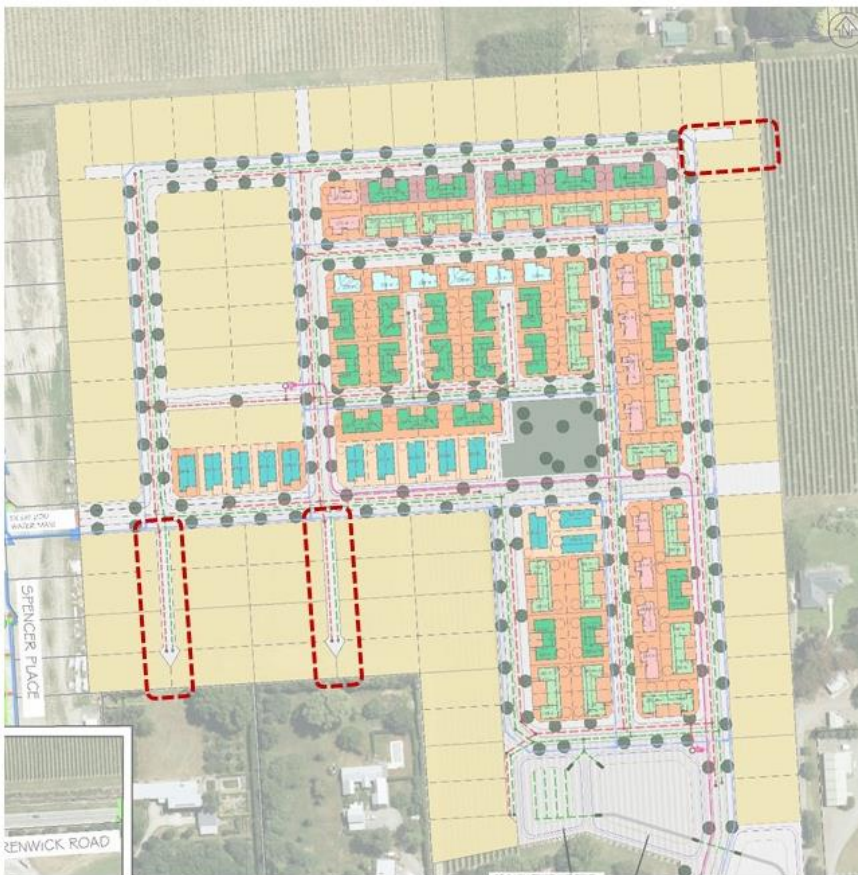
On the following aspects there is **room for improvement**:

- One or more additional external connections should be considered, especially to the south and possibly in the form of a pedestrian and cycling connection.
- Consideration should be given to deeper lots along the northern boundary to allow for a larger setback (or buffer) to rural activities in the Rural Zone to the north of the site.
- Some of the proposed blocks are too narrow for double-storey dwellings, resulting in backyard overlooking and overshadowing issues.
- The backs of some lots are exposed to the street, compromising privacy if a low fence was used, or requiring tall fences along the street resulting in a lack of passive surveillance and in a poor streetscape.
- Several private open spaces are located on the street side, compromising privacy if a low fence was used, or requiring tall fences along the street resulting in a lack of passive surveillance and in a poor streetscape.
- For some lots there are garages proposed for street corners, which will result in a lack of passive surveillance and in a poor streetscape.
- The opportunity for MDH in the northwest, as included in the proposed Zoning Plan, could be capitalised on.
- Proposed House Type D has no living function but only a bedroom to the front resulting in a lack of passive surveillance or compromised privacy for the bedroom.

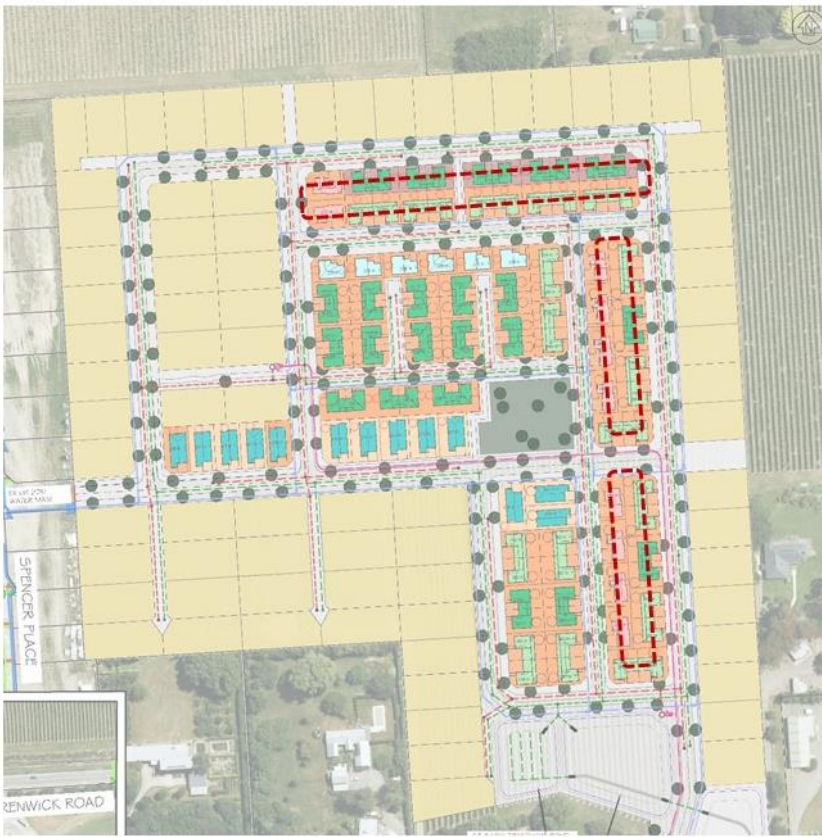
These issues are depicted in Figures 1.1. to 1.6. Diagrammatic alternative Concept Masterplan Options, addressing the issues described above, are included as Figures 1.7. and 1.8.



**Figure 1.1. Suggested improvements to the Zoning Plan proposed by the applicant: external connections marked by the solid-line arrows, or alternatively by the dashed-line arrows. A discussion should be had about the depth of the proposed lots along the northern boundary in light of the Rural Zone immediately to the north. This is however considered a planning issue, rather than primarily pertaining to urban design.**



**Figure 1.2. Urban Design Issue 1: additional external connections in the indicated locations should be considered.**

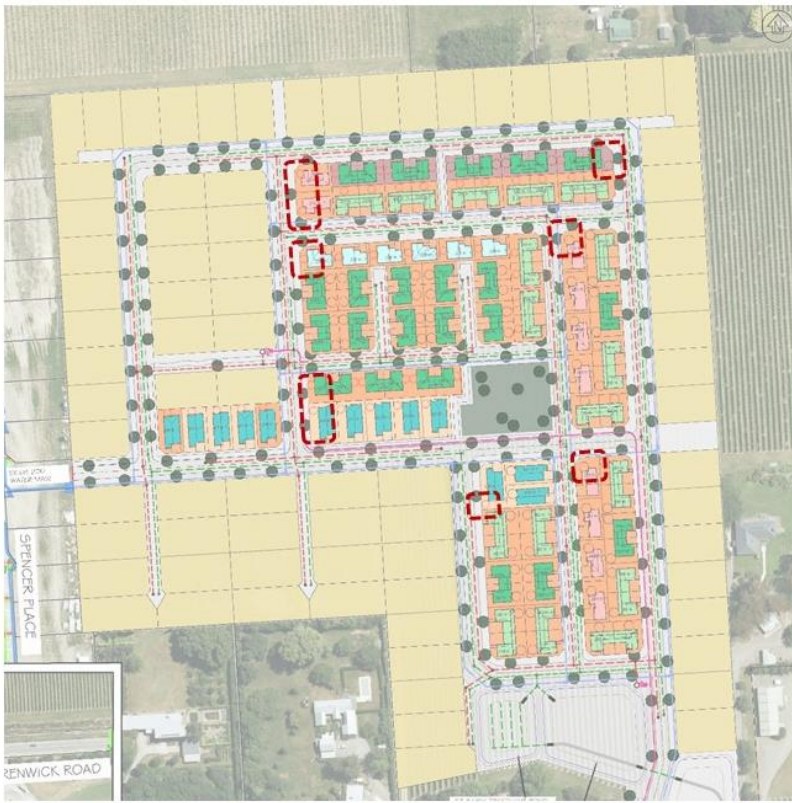


**Figure 1.3. Urban Design Issue 2: the indicated blocks are too narrow for double-storey dwellings, resulting in backyard overlooking and overshadowing issues.**



**Figure 1.4. Urban Design Issue 3: in the indicated location some backs of lots are facing the street.**





**Figure 1.5. Urban Design Issue 4: in the indicated locations there are private open spaces on the street side (or public walkway) requiring high fences along streetscape or, if low fence, poor privacy.**



**Figure 1.6. Urban Design Issue 5: in the indicated locations there are garages on corners, which negatively affect street activation.**



Figure 1.7. Suggested alternative Concept Masterplan Option 1 (overlaid over the applicant's proposal), with retention of as many characteristics of the proposal, but with the following urban design improvements:

- Increased external connectivity to the south, without loss of lots, with a possible alternative of this being a pedestrian and cycling only connection.
- Increased internal connectivity and legibility of the overall layout.
- Increased application of a perimeter block design approach with public frontages and private backs.
- Deeper blocks for greater privacy and improved solar access to private open spaces.
- Increased efficiency through generally narrower (but deeper) lots, meaning more developable land due to less street length per lot.
- More east-west lots for improved solar access.
- Greater width for north fronting lots that cannot be avoided, to enable north facing yards to the side of the dwelling.
- Rear-lane accessed dwellings fronting onto the western edge of the park.

The number of medium density dwellings in this suggested alternative is 108, compared to 107 in the applicant's proposal.

Please note that this is a diagrammatic concept only and that greater variation in lot types (specifically variation in width) is anticipated as this concept is refined and dwelling typologies applied. The distribution of standalone, duplex, and terraced dwellings is also indicative only and subject to refinement.





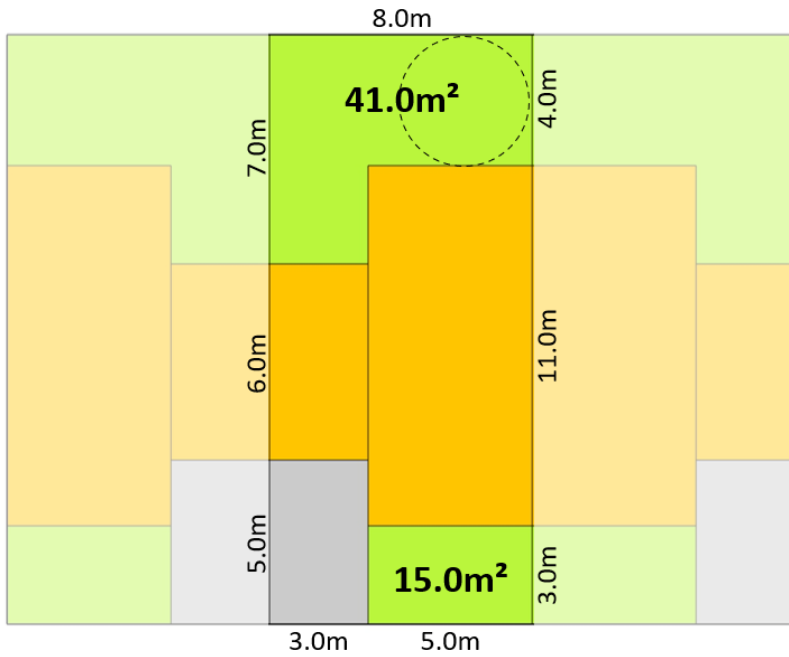
Figure 1.8. Suggested alternative Concept Masterplan Option 2 (overlaid over the applicant’s proposal), with retention of as many characteristics of the proposal, but with the following urban design improvements:

- North-western block also used for MDH, in line with the proposed zoning plan.
- Increased external connectivity to the south, without loss of lots, with a possible alternative of this being a pedestrian and cycling only connection.
- Increased internal connectivity and legibility of the overall layout.
- Increased application of a perimeter block design approach with public frontages and private backs.
- Deeper blocks for greater privacy and improved solar access to private open spaces.
- Increased efficiency through generally narrower (but deeper) lots, meaning more developable land due to less street length per lot.
- More east-west lots for improved solar access.
- Greater width for north fronting lots that cannot be avoided, to enable north facing yards to the side of the dwelling.
- Rear-lane accessed dwellings fronting onto the western edge of the park.

The number of medium density dwellings in this suggested alternative is 129 (albeit with a reduction of 12 larger, vacant lots), compared to 107 in the applicant’s proposal.

Please note that this is a diagrammatic concept only and that greater variation in lot types (specifically variation in width) is anticipated as this concept is refined and dwelling typologies applied. The distribution of standalone, duplex, and terraced dwellings is also indicative only and subject to refinement.

**APPENDIX 2: SUPPORTING IMAGES**



**Figure 2.1. High-level design test for the area of private open space (both backyard and front yard) on a relatively small, terraced housing lot that complies with other provisions proposed, to inform the provisions for Minimum Outdoor Living Space.**